

gasQS™ static

Screw in, connect, start measuring

The thermal conductivity is precisely determined with the help of a microthermal sensor. Thanks to its high sensitivity, the sensor is ideal for detecting changes in the gas composition of gas mixtures with more than two components. Unlike the market standard, the robust, compact and unobtrusive device requires neither readjustment nor a reference gas.

The two-wire connection allows easy integration into the control system without further knowledge of bus topology. The simple screw-in connection requires only minimal intervention in the pipe system and does not require a flue gas pipe.

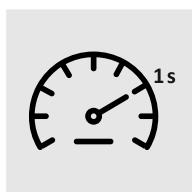
The instrument is pressure compensated and therefore independent of the prevailing process pressure.



Analog
4–20 mA



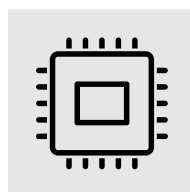
Very sensitive



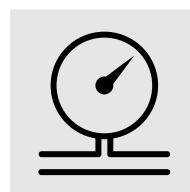
Fast measurement cycles



No complex bus integration



No moving parts



Pressure compensated

Measuring range multi-component mixtures

Output value std. ¹	Unit	Range ²	Accuracy	Repeatability ³	Sensitivity ⁴
Relative Density	<i>d</i>	-	±0.02 typ.	±0.002	±0.004
Higher Calorific Value	<i>H_s</i>	<i>MJ/m³</i>	±2	±0.2	±0.4
Methane number CAT	<i>MN</i>	-	±1	±1	±2

From the liquid phase vaporised LNG (MZ >55)

¹ One output value per device, standard conditions 0 °C, 25 °C, 1013.25 mbar absolute, further reference conditions on request
² The specified accuracies apply to binary gas mixtures. For multi-component mixtures, the accuracy varies depending on the gas family or the bandwidth to be covered.
³ Statistical scatter value with 2 sigma of 48 measuring points
⁴ Double value of repeatability

Measuring range binary gas mixtures

Output value std. ⁵		Unit	Range	Accuracy	Repeatability ⁶
Percentage of gas	-	mol%	binary gas	±1 %typ.	±0.1 %
Density	d_n	kg/m ³	mixtures ⁷	±1% of MV ⁸	±0.1 %
Higher Calorific value	H_s	MJ/m ³	e.g., biogas	±1% of MV	±0.1 %

Specifications

Measuring time:	0.1 seconds
Measuring interval:	1 second
Response time:	T90 typically 2 seconds ⁹
Meas. range temp. compensated ¹⁰ :	-20 ... +80 °C
Operating/storage temperature ⁶ :	-25 ... +85 °C
Ex device protection type and certificate number:	Ex II 1G Ex ia IIC T4 Ga IECEX SEV 22.0008X SEV 15 ATEX 0191 X

Media

Media:	dry, neutral gases (10 µm filtering)
Load limit supply line:	+30 bar gauge
Supply line pressure range:	standard: -0.5 ... +9.0 bar gauge extended: -0.5 ... +15.0 bar gauge (on request)

Electrical

Connector:	M12-B, male, 5-pole
Output signal:	Analog 4 – 20mA
Supply voltage:	+12.0 ... +28.0 VDC
Maximum load:	$R \leq (V_s - 12 \text{ VDC})/0.02 \text{ A}$

Mechanical

Gas connection:	G 3/8 male thread
Dimensions (Diameter x Height) :	51 x 54 mm
Weight:	0.15 kg
Protection class:	IP54

Accessories (optional)

EX Package	1x SMART transmitter power supply unit 1x 10 m cable PVC assembled, shielded, RAL 5015 blue
Tee piece	Fitting optimised for fast measurements, G1/4 – G3/8 – G1/4

⁵ One output value per device, standard conditions 0 °C, 25 °C, 1013.25 mbar absolute, further reference conditions on request

⁶ Statistical scatter value with 2 sigma of 48 measuring points

⁷ When mixing two gas mixtures of known composition a binary gas mixture is formed.

⁸ Measured Value (MV)

⁹ Depending on distance between device and gas line

¹⁰ Medium and ambient temperature